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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/998,578	11/16/2001	Marcel F.C. Schemmann	11890/3	7446
7590 02/13/2004				
KENYON & KENYON One Broadway New York, NY 10004		EXAMINER PHAN, HANH		
		ART UNIT PAPER NUMBER		
		2633		
		DATE MAILED: 02/13/2004 7		

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/998,578

**Applicant(s)**

SCHEMMANN ET AL.

**Examiner**

Hanh Phan

**Art Unit**

2633

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 24 and 25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 24 is/are rejected.
- 7) ☒ Claim(s) 25 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. Applicant's election with traverse of Group VIII directed to claims 24 and 25 in Paper No. 5 is acknowledged.

Applicant argues that Group VII (claim 23) and Group VII (claims 24 and 25) concern related methods of reception of quadrature-return-to-zero (QRZ) modulated signals for addressing detrimental effects of phase noise, chromatic dispersion and polarization mode dispersion. The examiner respectfully disagrees. Group VII corresponding to Figs. 25A and 25B talks about a method of rotating an I, Q constellation in the electrical domain. Group VIII corresponding to Figs. 26B and 27 talks about a method for compensating for phase noise, chromatic dispersion and high order PMD effects electrically. The method of Group VII (claim 23) and the method Group VIII (claims 24 and 25) are different. Therefore, it is believed that two methods of Group VII and Group VIII are different.

### *Drawings*

2. The drawings are objected to because Figures 1, 3, 6, 8, 10, 11, 12, 14A, 14B, 16, 17A, 17B, 18A, 19, 20, 22, 23, 24, 25A, 26A, 26B and 28 **are too small and not clear**. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 24 is rejected under 35 U.S.C. 102(b) as being anticipated by Kass et al (US Patent No. 5,311,346).

Regarding claim 24, referring to figure 2, Hass teaches a method for compensating for phase noise, chromatic dispersion and high order PMD effects electrically comprising:

receiving a set of I and Q data streams (Fig. 20);

in first stage, compensating for frequency-independent phase noise and outputting to a second stage; and

in a second stage, compensating for frequency dependent chromatic dispersion and high order PMD effects (col. 2, lines 36-67, col. 3, lines 1-32 and from col. 4, line 64 to col. 6, line 67).

5. Claim 25 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

**Conclusion**

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Cao (US Patent No. 6,104,515) discloses method and apparatus for providing high order polarization mode dispersion compensation.

Hakki (US Patent No. 5,659,412) discloses polarization diversity detection of optical signals transmitted through a polarization mode dispersive medium.

Willner et al (US Patent No. 6,646,774) discloses polarization diversity.

Strasser et al (US Patent No. 6,658,215) discloses arrangement for mitigating first order and second order polarization mode dispersion.

Mecozzi et al (US Patent No. 6,674,972) discloses method for polarization mode dispersion compensation.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Phan whose telephone number is (703)306-5840.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan, can be reached on (703)305-4729. The fax phone number for the organization where this application or proceeding is assigned is (703)872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4700.

*Hanh Phan*  
Hanh Phan  
02/06/04